National Institute of Environmental Health Sciences

A post-Kyoto partner: Considering the stratospheric ozone regime as a tool to manage nitrous oxide

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Abstract:

Nitrous oxide (N2O) is the largest known remaining anthropogenic threat to the stratospheric ozone layer. However, it is currently only regulated under the 1997 Kyoto Protocol because of its simultaneous ability to warm the climate. The threat N2O poses to the stratospheric ozone layer, coupled with the uncertain future of the international climate regime, motivates our exploration of issues that could be relevant to the Parties to the ozone regime (the 1985 Vienna Convention and its 1987 Montreal Protocol) should they decide to take measures to manage N2O in the future. There are clear legal avenues to regulate N2O under the ozone regime as well as several ways to share authority with the existing and future international climate treaties. N2O mitigation strategies exist to address the most significant anthropogenic sources, including agriculture, where behavioral practices and new technologies could contribute significantly to reducing emissions. Existing policies managing N2O and other forms of reactive nitrogen could be harnessed and built on by the ozone regime to implement N2O controls. There are several challenges and potential cobenefits to N2O control which we discuss here: food security, equity, and implications of the nitrogen cascade. The possible inclusion of N2O in the ozone regime need not be viewed as a sign of failure of the United Nations Framework Convention on Climate Change to adequately deal with climate change. Rather, it could represent an additional valuable tool in sustainable development diplomacy.

Source: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3607011

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Air Pollution, Unspecified Exposure

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Global or Unspecified

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Health Outcome Unspecified

Intervention: ☑

strategy to prepare for or reduce the impact of climate change on health

A focus of content

Mitigation/Adaptation: ☑

mitigation or adaptation strategy is a focus of resource

Mitigation

Resource Type: ☑

format or standard characteristic of resource

Policy/Opinion

Timescale: ☑

time period studied

Time Scale Unspecified